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Vol. XI OCTOBER, 1941 No. 8

CONTENTS

Health Education in the Schenectady Schools 223
John E. Burke, M.D.

Can Service Encroach on Health Education? 229
Joseph W. Mountain

How to Teach Parents the Basic Principles of the Physical Growth and Development of Children and Youth 236
Edith A. Eaton

Editorial 244

Abstracts 246

Reviews 253

Meeting 255

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Vol. XI OCTOBER, 1941 No. 8

HEALTH EDUCATION IN THE SCHENECTADY SCHOOLS

JOHN E. BURKE, M.D.

*Assistant Superintendent of Schools, Schenectady, N. Y.**

Consideration of the health of each child in our schools is receiving increasingly more and more attention. Academic programs, to meet the needs of individuals is the generally accepted practice. While these programs are not always realized, the goal, I believe, is looked forward to by most of our teachers. This principle of trying to meet individual needs has stimulated health work a great deal in the schools. Not only are teachers and school administrators giving more thought to the health programs in school, but many groups outside the teaching profession are concerned. Medical Societies, Dental Societies, Parent-Teacher organizations and other adult groups are giving time on their programs to the matter of health education in schools.

In our local school system we have for a great many years tried to carry out in so far as funds would allow the recommendations of the Hoover White House Conference. Repeatedly the White House Conference stressed the importance of knowing our children and their homes, so that their varying health needs might, in cooperation with the homes, be understood and given the necessary attention. The New York State program conforms pretty well with these recommendations.

When school opens at the beginning of the school year, we require that all new entrants have a complete physical examination made by their family physicians. In addition to the examinations we have tried to have a short history of the child's health, including such illnesses as he has had since birth. The examinations at this time include the dentist's recommendations as well as the physician's. Children, after this first examination are given subsequent examinations at the 4th, 7th, 9th and 11th grades. If we succeed in completing these, we begin with the 5th grades and do as many others as we are able to finish during the school year. Always at the beginning of a school term consideration is given

*In direct charge of the school health and physical education program.

to the examination of children who warrant early examination. Secondly, children who are entering our school system for the first time at any level are examined next. We then proceed with our regular routine examinations.

Much has been said as to just how thorough these examinations should be. Because school facilities are limited, we cannot make the complete surveys that might be made by the family physician or by a medical clinic. We have, therefore, felt that when we consider the nutrition of the child; his general musculature and posture; the condition of his feet; an examination of his eyes, ears, nose, and throat; an examination of his heart, and such additional examinations as suggest themselves when he is seen, that such reviews of our children make it possible for us to know pretty well what their general condition is. We continue to encourage parents all through the child's school life to be advised by their family physicians. We consistently refer whatever findings we make to the homes and to their physicians. Other than the examinations given when a child first enters school, we haven't been anything like as successful as we would like to be in having parents present at the examinations. The mechanics of this has been somewhat difficult for us to work out. To make subsequent appointments for parents that will be possible for our part time school doctors to meet is a difficult matter. Part time doctors are frequently delayed on account of emergencies, and are not able to keep school appointments at definite hours. To ask parents to come to school and very often have to wait for the doctor has been one reason why we have not succeeded in having a larger number of parents present when their children are examined. If school physicians were all working full school time, this problem would be easier to solve. Again, parents are reluctant, when their children are seemingly well and healthy, to give up their time to come to school for such examinations. We are not unaware of the desirability of having parents present as an educational procedure both for parent and child. We continue to look forward to the day when all parents will be present at these examinations.

In addition to these routine examinations, our practice is, as I have mentioned previously, to examine all children who seem to be in need of early examination. Most of these children will be referred to their family physicians, or to clinics if they are clinic cases, for laboratory work and such other special work as the schools are not equipped to do.

On the school staff we have a school oculist and aurist, a school orthopedist, a school heart specialist and an allergist. When tuberculosis is suspected, our children are sent to the tuberculosis clinic for examination and x-ray. In looking back over the years, it has seemed to the writer that while the school examinations haven't been complete health surveys, as is so often suggested today, we haven't been faced at different levels in our school system by children having health problems that we have failed to recognize. Our big problem is to get all the medical attention done that we feel should be done. We persist in our follow-up service in encouraging parents to assume responsibility for the health of their children and to be advised by their family physicians.

The nurses in our school system, in addition to doing the conventional school nurse's work, handle the school social problems in their districts. This brings our nurses in daily touch with the various social agencies in the community. The municipal health department and the school health department cooperate in the exchange of data that is mutually desirable. The schools in this city do not have dental clinics nor do they employ dental hygienists. Children are urged to see their dentists twice a year, and parents are sent notices calling attention to the importance of the care of their children's teeth. The dental problem in this community is a very large one. We find that a large percentage of our elementary school children at all times need dental attention. When they arrive at the high school level that percentage gets smaller. We have felt that this has happened because of the continuous educational program that we try to carry on.

Such dental work in our city as is done for school children is done by the municipal health department dental clinic and by some of our dentists who work for some of these children in their own offices. The writer feels that in so far as schools are concerned this dental problem must continue to be one of education both in and out of schools. There is as yet some uncertainty as to all the factors involved in dental health. It is likely that prenatal clinics can do as much as any one group.

Paralleling these things that have been described, provision is made in special classes for children who do not see well, who do not hear well, and for those who are physically crippled. The less gifted child is also cared for by means of special programs to meet his needs. In this city, this problem is met in a special school pretty largely. We are not unaware of the disadvantages in

segregating children if we can keep them in a normal school situation. This we attempt to do in so far as possible. Placement of these children in special school situations is always made after rather complete medical and psychological studies. In making these studies we use the family physician and many local specialists both in and out of the school system. Our procedure after study of these cases is to have conferences to which we invite school principals, teachers, school nurses, and others who may be helpful in determining the best plan to be carried out in each individual case. This procedure not only results in great help to the child and his parents, but it helps all participants in the conference to better understanding of problems that they meet daily.

Pretty largely, the matters which have been discussed are things that are done for children. We hope in doing these things to make them educational both for the homes and for the children. We attempt to make every contact by our health personnel in the schools an educational one. At all levels we carry on a program of health instruction with groups. At the elementary level this instruction, like other instructional problems, is the classroom teacher's job. She is free and encouraged to consult with her school doctor, her school nurse, and other school health specialists at all times when she feels the need of help. At the secondary level in our junior high schools we require one period a week in health instruction of all of our students. This work is carried on in most instances by our physical education personnel and some general science teachers. We also encourage the integration of health teaching in all subject matter fields where it is at all pertinent. In the fields of home economics, general science, biology, social studies, and physical education there is much health instruction given. At the junior high school level, a guide is furnished so that we may be more certain that materials are covered that are adaptable to the age levels. In the senior high schools because of a crowded curriculum we haven't been able to devote definite periods to health teaching. We do encourage integration of health teachings at this level as we do in the junior high school level.

The school activity program in physical education furnishes splendid opportunities for health teaching, and we take advantage of this. Probably some of our best teaching, particularly with reference to the development of healthy personalities, is done by our physical education group. A wide participation rather than the development of specialists is our aim in the physical education

program. This plan is motivated largely for the reason that we believe that the health values in physical education are important for all.

It has been our purpose over the years in the health work in our schools to discourage the development of any paternalistic attitudes toward our health program. We believe that schools must know that children whom they have responsibility for teaching are in sufficiently good health to profit by this teaching. Our purpose then, in examining children and in urging parents to cooperate with us in getting such attention as their children need to insure their best possible health is health education. It is not the practice of medicine or nursing in the school system. In our health instruction classes, and in our individual contacts with children, it is our aim to indicate the legitimate agencies that society sets up for doing health work. We would not like to feel that our program in health education makes children dependent. We want them to know, when they have finished their school life, how to carry on, healthfully in so far as they are personally concerned and in so far as their communities are concerned.

For many years the local Board of Education has had a Medical Advisory Board to the schools. This Board consists of eight representative physicians and one dentist. The various specialties are represented on the Board. The Health Commissioner of the city is an ex-officio member of this Board. Regular monthly meetings are held, and the secretary of this Board communicates to the Superintendent of Schools such matters as the Board has given consideration to. Material to be considered may originate in the Board or with the Superintendent or with a parent or any other individual or group in the community. This plan at all times keeps the schools informed as to health matters in the community and criticisms of any nature that may arise. The relationship has been a mutually satisfactory one to the practicing physicians and to the schools.

This rather sketchy story of Schenectady's health education philosophy may well be closed by quoting Dr. Benjamin Spock. "And finally, improvement in school children's health needs an ever increasing awareness and interest in the child as a total human being on the part of teachers and school administrators. This means that teachers' colleges must come to lay just as much emphasis on the child's emotional, physical, and social development as it does on the subjects it is to teach him. It means instruction

by psychiatrists, psychologists, and pediatricians, not alone in separate courses, but integrated with the whole teaching program. It means that when teachers get jobs themselves they will not only be educated to the point where they can cooperate with physicians, psychiatrists, and guidance workers, but that they will insist on such help, and thereby aid in making it forthcoming."

* * * * *

Whole Grain Bread,—Heupke stresses that in the average diet now available in Germany the supply of vitamin B_1 will be adequate only if a considerable portion of the bread consumed is of the whole grain type. Whereas 400 Gm. of rye whole grain bread contains 840 micrograms of vitamin B_1, the more refined types of bread contain only from a sixth to a fourth of this amount. Moreover, it is known that the vitamin B_1 requirements are the greater the higher is the sugar and starch content of the diet. In view of the high carbohydrate content of the present-day diet, the use of whole grain bread is a necessity in order to insure an adequate supply of vitamin B_1. Vitamin B_1 is found exclusively in the grain germ and in the aleuron layer, that is, in those parts of the grain which are removed in milling the flour for the refined types of bread, whereas they remain in the flour used for the whole grain type of bread. The grain germ contains other valuable substances such as lactoflavin, vitamin A, and vitamin E. Whole grain bread differs from refined bread also in protein, starch, and mineral contents. The germ of the grain and the aleuron layer contain more valuable proteins than do the other parts of the grain, and for this reason the whole grain bread contains more valuable proteins than do the refined breads. Furthermore, the refined breads contain few minrals, because phosphoric acid, calcium, magnesium, and iron are found chiefly in the external layers of the grain. Other valuable constituents of whole grain bread but not of refined bread are the auxins or growth substances. The greater nutritional value of whole grain bread has been proved by feeding experiments on animals. It has been proved that whole grain breads are valuable for the development and preservation of teeth and in the prevention of chronic constipation. The use of whole grain breads is now advocated in all civilized countries. Whole Grain Bread, the Bread of the Future. W. Heupke. Medizinische Welt, November 16, 1940, p. 1172. Abstracted in: The Journal of the American Medical Association, June 7, 1941, p. 2635.

CAN SERVICE ENCROACH ON HEALTH EDUCATION?[1]

by

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United States Public Health Service, Washington, D. C.

The topic for this round table discussion inquires whether service *is* encroaching on public health education, and I am obliged to begin with the admission that the question itself has me puzzled. What is meant by education as thus used? What are its boundaries? Are we to consider service as one public health phenomenon and education as another with the idea that they are two mutually exclusive entities?

It seems to me highly arbitrary and unnatural to speak of service and education in the field of public health as though they went about in separate vehicles and performed their duties independently of each other. Education pervades experience in public health as in every other field of human activity. A sidewalk bystander watching a man laying bricks gains some concept, some learning, of the art of brick laying. A child experiencing his first journey by rail picks up information as to how one goes about such a trip. When a public health nurse walks into a home with the remark, "I am the nurse from the health department . . .", the family learns from that first clause, if they had not already known it, that the health department has nurses and that the nurses come to the homes.

My inability to separate experience and education has compelled me to reword our topic for discussion to ask whether service *can* encroach on education. In considering this question, it seems to me that we may, without being too arbitrary, separate public health education into the learning which goes along with service willy-nilly and the more academic type of education consciously administered by the educator in an effort to add to human knowledge and to influence human behavior. As to the first, I am unable to see how service can encroach on that which is of its very essence. And as to the second, my feeling is that service has priority over it.

Public health education according to the first meaning is as old as public health itself, and accompanied the first service,

[1]Based on remarks in a panel discussion at the joint session of the Health Officers' Section, the Public Health Education Section, and the American School Health Association. Sixty-ninth annual meeting of the American Public Health Association, Detroit, Michigan. October 7-11, 1940.

whatever we might conceive that to have been. I think it highly important to the relevance and soundness of our reasoning in this discussion that we keep in mind that public health began in service and continues in service. Unless we do, we are going to assume in our premise a public health which is abstract, academic, and, you might say, supercilious, since apparently it favors leaving its old work to others. That is neither a desirable nor a true premise.

You may not thank me for reminding you that many of the early health departments started life as scavenger agencies concerned with the collection of night soil, to which duty as the aesthetic sense of society developed was added disposal of garbage and refuse. I challenge anyone to name any other municipal functions which contribute more than do these three to human health, happiness, and comfort. Installation of sewers and other civic improvements gradually cut down on the necessity for these public health duties. The original interest of public health in the whole field of waste disposal shrunk little by little until today only the remnant may be found in our rather halfhearted efforts directed toward privies and small septic tanks. And by the way, one of our beloved inconsistencies considering our past is that we must keep our relationship to the operation of public systems at an inoffensive advisory distance.

Public health's duties of law enforcement were distinctly services to begin with. At one time, and not so long ago, the health department sought out citizens chiefly because of nuisances disturbing to the peace, or the delicacy of the neighbors. You know the list—weeds, smoke, dead animals, noise, rats, faulty housing, and overflowing privy vaults. Gradually health departments progressed to higher levels of activity and in doing so sloughed off these responsibilities. Today, however, we find in some of these old nuisances new causes and effects of great interest to public health: weeds-allergy; noise-neurosis; smoke-respiratory disease; rats-typhus; soil pollution-intestinal parasites. Housing and health are constantly paired off now in many a public health discussion. All these subjects suggest avenues for services. If the service is necessary to meet the responsibility, the question of whether it encroaches on education seems to me artificial and without point.

One of the newer aspects of public health is to be found in the personal assistance it offers to those who need medical attention. Consider how exceedingly personal this assistance is in the programs to help the physically handicapped. The disabled persons

must first be located. A physical examination to determine the nature and extent of disability starts off the work of rehabilitation. Then follow corrective measures with all the preliminary conversation and understandings entailed. And finally the person, restored so far as his disability and the circumstances permit, must be re-educated to meet his world. This art and science of rehabilitation, as it might be called, is carried out not so much for the good of the community, though that enters in, but to salvage human beings.

This increasingly personal relationship of health agencies to the people has been fostered by programs of health education and in turn has introduced more such programs. More power to the partnership of service and education—a partnership that has done so much to free the human race from disease. I have great faith in public health education, and I proclaim it now just in case my choice of sides in this discussion should be misinterpreted. I nonetheless remain, and expect to continue, puzzled by the notion that service might be encroaching upon this education. Perhaps the indiscriminate use of the word "service" has proved alarming to those who espouse the cause of health education and has given rise to such questions as the one posed for us here today.

This increasingly personal relationship of public health to the population has brought out in sharp relief the problem of the medically needy, for those people who cannot afford the physician's care, hospital care, drugs, appliances, treatments, or whatever form of medical help they need, do constitute a huge and grave problem. Discussion of this problem by public health people is mysteriously taboo. Such discussion is likely to provoke the cry that the matter is not a concern of public health. Whether that be true or not, the problem certainly prowls around the public health field and plagues our field workers day in and day out. No wonder they ask so frequently and urgently, "Cannot medical care be secured somehow for these people who need it but don't have the money for it?" No wonder they look upon this as one of our greatest social questions. No wonder when the day's sights have been especially grevious, they are inclined to shout it from the housetops.

Health departments can, and many of them do, offer generalities to these medically needy and call the generalities education, but that rationalization is no solution. The admonition to "See your doctor" or "See your dentist" is no more than passing the

time of day with an ailing person. Your modern man with a pain is wont to give a thought to going to the doctor. For one reason or another he may not go. Perhaps he hasn't the money. Perhaps the pain goes away. Perhaps a neighbor inspires him to try the wonderful "doctor" on the other side of town who cures a sick person by placing his psychic hands on the affected part. Or he may decide to buy something at the drugstore and direct his own cure. But at any rate we may be sure the advice "See your doctor" adds little or nothing to the influences which will cause him to act. And certainly there is no particular educational meat in such advice, unless the person was unaware of the existence of physicians.

Whether we can keep public health in the vanguard of social action, where by hereditary right it belongs, by measures short of medical care is not the topic for this round table. Nevertheless the persons who cannot secure their own medical care constitute a large and challenging problem, and if we intend to step out in public with this problem at all, we surely realize that we must produce more than education since we represent what is essentially a practical movement to improve the public's health.

I know that I am broaching a subject wide open to argument. Even though we all would probably agree that some part of the medical care needed by the people of this country must be provided at public expense, the question of who should give it remains decidedly a moot point. On numerous occasions I have argued that the health department should be the administrative agency, and I think my reasons are supported by the experience of those health departments that have taken this forward step. The claim is sometimes advanced that the treatment function would soon overshadow other interests of a health department, and my answer is that perhaps it should.

Of this problem of the medically needy and indeed of any public health problem, ancient or modern, I would say that our technique must consist of service primarily, plus education, the function of the education being to make the service effective and to insure its support.

The whole history of the public health movement shows precisely that relationship—service plus education. As public health assumed greater responsibilities, the chances to educate became progressively greater. The arrival of the germ theory gave the educational partner excellent subject matter, and public health edu-

cation as a unit in its own right now began to take shape. As medical knowledge advanced and the movement consequently had more information to offer, this educational unit became stronger. Advances in recent years have added greatly to its curriculum, particularly those in the field of nutrition.

With this course of events I have no quarrel at all. Education as a distinct technique within public health has prospered partly as a consequence of our American faith in the valuableness of education, and I too hold that faith. There is considerable truth in the particular faith behind public health education—that if people are informed as to what they should do to attain the higher and healthier life, they will be up and about it. But I should like to remind you that educators in the very hall of learning have no illusions about remaking the world in short order. Every English teacher, to take an example, philosophically recognizes that many a pupil who has stood up and dutifully recited, "All the world's a stage and all the men and women merely players," will select someone's confession from a lurid life when he has a dime to spare for literature.

The problems of public health are too immediate to be settled by education. Public health is essentially a movement to protect the public from typhoid fever, diphtheria, tuberculosis, and all the rank and file of those subtle and experienced enemies of man. These diseases cannot be exorcized by education. We have not yet even exorcized ignorance and prejudice by education. You may send a public health teacher to every man, woman, and child in a community to tell the story of immunity, but to achieve immunity you need the service department of public health.

Public health of all our institutions must be justified by works, and by works I mean public health services administered by physician, nurse, or sanitarian. A health department is not an educational institution, and its workers are not regarded as educators by the general public. They are not set forth as educators in the budget. And when I appear before appropriations committees, as I have been appearing now for some years, to present the brief for what we are asking in public health, I tell them of the services that public health performs.

And why should our trained professionals suddenly turn themselves into teachers? Physicians are taught how to treat the sick, nurses how to care for the sick, and engineers how to control the environment. Should they now neglect their fundamental training and obligations to go preaching the healthier life?

No, I have no apprehension that service in public health is encroaching on education. Quite the contrary. According to the dictionary to encroach means "to enter by gradual steps or by stealth into the possessions or rights of another." Our public health services are not entering by stealth into the rights of education. After all, the services were here first.

Indeed my inclination is to reverse our topic and worry about the encroachment of education on service in public health. While mulling over my ideas on this subject, I opened the Appraisal Form for Local Health Work and its companion, Community Health Organization,[2] to find out how service and education fared in the proposed budgets. In table 6 of Community Health Organization, the recommended minimum annual budget—geared to a city of 100,000 population—is $1.976 per capita. I have divided the items as belonging under service or under education with the exception of administrative functions and vital statistics which for accounting purposes are usually classed as overhead.

Under service, I have included operation of the laboratory and the communicable disease hospital, bedside nursing, and clinical provisions for venereal diseases, tuberculosis, school hygiene, and maternal and child hygiene. Under education, in addition to the actual item of education, I have included all nursing exclusive of bedside care, communicable disease control exclusive of hospitalization, and environmental sanitation. I am not ignoring the fact that the latter two are also regulatory, but with our discussion divided into education and service, they would go with the former rather than the latter. Then too, I have been influenced by those progressive epidemiologists and sanitarians who insist that they are not so much law enforcement officers as they are health educators.

When I reduced this minimum budget to a percentage basis, these recommended expenditures became the equivalent of eight percent for overhead including vital statistics, forty-two percent for services, and fifty percent for education. If expenditure may be taken to represent effort, then half our energy is going toward what may in a broad sense be classed as education. Even the "all out" exponents of education might concede in the privacy of the group here assembled that they have done right well by themselves within the framework of what is ostensibly a "service" organization.

[2]**Appraisal Form for Local Health Work,** American Public Health Association, Committee on Administrative Practice.
Community Health Organization, The Commonwealth Fund, New York.

I should like to bring this expression of my views to a close by reaffirming my approval of health education. For I do most heartily approve of measures that increase a person's understanding of the factors behind human health and that influence him to seek health intelligently.

This approval is not at variance with the significance which I attribute to service in public health. Surely the most ardent educator will not dispute that public health began and still continues in service, nor that the basic professional groups—physicians, engineers, nurses—have been trained to render the services made possible by the medical and sanitary sciences. These professional people, whether they work out of health departments, schools, or voluntary agencies, are in a position to carry on valuable and lasting health education by making their routine service a true educational experience. If they do that, we shall have no basis for arguing over the rights of education and service, for the two are elements of the same act, and complement each other.

* * * * *

Heart Disease Among Students,—Cole states that among the 28,139 students admitted to the University of Wisconsin between 1931 and 1939 who were given complete physical examinations there were 289 with heart disease. The sex ratio was 1.7 females and 1 male. This is a higher proportion of females than is commonly observed. The mitral valve was most frequently involved and it was clinically diseased in 91 per cent of the cases, the next most frequent site was the aortic valve in 15.5 per cent and there were only 2 cases of involvement of the pulmonic valve. Cardiac enlargement was shown to be present in 31.8 per cent of the patients, and 15.9 per cent had elevated blood pressure. Pericardial changes were observed in 14 cases. Disorders of rhythm were present on the electrocardiograms in 11 cases. More studies of this type, in view of the similarity of circumstances and conditions surrounding college students, would give an additional impetus to furthering preventive medical practice. Cardiac Disease Among 28,139 Newly Entering Students at University of Wisconsin. L. R. Cole. American Journal of Medical Sciences, February, 1941, p. 197. Abstracted in: The Journal of the American Medical Association, June 7, 1941, p. 2621.

HOW TO TEACH PARENTS THE BASIC PRINCIPLES OF THE PHYSICAL GROWTH AND DEVELOPMENT OF CHILDREN AND YOUTH

EDITH A. EATON

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In a symposium on the topic, "Why Do Parents Need Special Training?"[1] Ernest R. and Gladys H. Groves point out the fact that only the trained eye can detect trouble in a child's life when the disturbance is fresh and can most easily be uprooted. The significance of this observation in the realm of the physical growth and development of children is apparent. Too often physical disabilities in children are not discovered, or are neglected, by parents until some serious disorder appears. Many parents are assumed to know the fundamentals of health training and care; the distressing truth is that this is a neglected area in their own upbringing. Diehl[2] comments on the ignorance of high school graduates in matters affecting their own body structure, function, and welfare. How can young parents, themselves but recently students in secondary schools, guide the physical growth of their children effectively? How can older parents—some of them with families of seven or eight children, and almost completely ignorant of their own anatomy—be helped to understand their children's developmental needs?

To meet this urgent need for parental training in physical matters, one must first consider the sort of parents involved in any local program. A recent questionnaire sent out by the writer to five hundred parents in this area made evident the breadth of the program in attempting to reach all sorts of parents. There is, for instance, a wide range from high to low economic groups; educational backgrounds involve the first five grades of elementary school (or, even lower) up to some years of graduate study; both fathers and mothers attend group discussion meetings; non-English speaking parents appear in nursery school groups; Negro parents have formed parent study groups in connection with their

1. **Why Do Parents Need Special Training?** A Symposium. Child Study Association of America. (In pamphlet form) p. 4.
2. **The Health of College Students.** Diehl, Harold S. and Shepard, Charles E. The American Council on Education. Washington, D. C. 1939. p. 62.

own nursery school; representatives of Catholic, Protestant, and Jewish religious faiths are enrolled; the age range is from the early twenties to the late forties; size of families is from parents without children, expectant parents, and parents with only one child up to the family with fourteen living children.

Obviously, to meet the health education needs of individuals in so heterogeneous a group, both content and methods must be carefully considered. Let us first take up the matter of content.

Content,—What are the fundamentals of health education which *all* parents should have? What are the special things which *certain* parents will need to have?

Under the category of fundamentals should be listed, first, the inculcation of healthy attitudes toward health. Dr. Lucas[3] reminds us that this does not mean that all children must conform, but that each child must be helped to develop his individual capacities. The child who is different can be taught to face his weakness and his strength with a view to gaining both physical and mental health. In this connection Kugelmass[4] says that it is imperative for parents to have physical defects corrected early in the lives of children to prevent unfavorable reactions upon their personalities. The whole matter of healthy attitudes is summarized in a statement, again by Dr. Lucas[5], to the effect that parental attitudes may shift from over-anxiety about babies to negligence of older children's health. This is borne out by the high incidence of physical defects in school age children, which periodical health examinations throughout the growth period would discover.

Assuming that parents have been aroused to a healthy concern for their children's health, the second fundamental would seem to be the provision of accurate sources of information about the whole process of physical growth and development. Because this present course of study has embodied these processes in such a clear and concrete form, it is most suitable for parental education in this field. Orientation to the world in which parents and children live is provided in the consideration of evolution and heredity; an understanding of growth as a continuous process, phases of growth from the pre-natal stage to adulthood, sickness and death rates in relation to age, nutrition, physical defects, and mental health,—all these topics would build a well-rounded course of study. Moreover,

3. **Our Children,** edited by Fisher & Gruenberg, the Viking Press, New York, 1932. ch. VII—**"Healthy Attitudes toward Health"** by W. P. Lucas. pp. 79-80.
4. Ibid—ch. VI—**"Changing Goals of Positive Health,"** by I. Newton Kugelmass. p. 71.
5. **"Healthy Attitudes toward Health"**—Child Study Magazine, Oct., 1938. Editorial by W. P. Lucas. p. 2.

the excellent bibliography provided in this course can be used with parents to good advantage.

A third essential in the matter of content in health education for parents is the provision of some way to get direct action from them in the application of their knowledge. It is not enough to have a changed attitude about health, or complete knowledge of health essentials; there must be, in addition, an incentive to use these principles. Dr. Ruth Andrus[6] mentions this problem of relating knowledge to conduct as a "lag between research and living." Many educators deplore the possession of unused knowledge. Parent education, especially, is under fire of criticism frequently as being merely another "intellectual pastime," a "pink-tea affair," or, more pointedly, a "waste a time of mothers who ought to be at home minding their own households." In making parents aware of the necessity of action Teagarden[7] warns that parents need encouragement and confidence as well as information. So it would seem that application of knowledge could be attained by a practical scheme of projects for parents to work out with their families in health matters. Are the parents themselves in good physical condition? Have they undergone a complete physical examination recently? Do they have in their possession free and inexpensive pamphlet material available from numerous sources—the State Department of Health, Life Insurance Companies, United States Government Departments, the National Education Association, the American Public Health Association, Child Welfare Research Stations—and many others? What sort of health material do parents get from the newspapers, magazines, and the like? Is this authentic? How can they tell? Next, have they given every one of their children the necessary pre-natal and infant care? Are their children immunized against disease? Are their children's births properly registered? Then, are they cooperating with the schools their children attend in health and physical education? Do they know what the school program is? And, finally, to what extent are they trying to develop an adequate program of public health in their particular communities? These questions could be presented in the form of projects to be completed and reported as they were finished. A progressive system, starting with personal needs, could be extended into a program of highly effective community service.

6. **Discovering Lay Leadership in Parent Education,** by Ruth Andrus and Associates. The University of the State of New York Press, Albany, 1935. p. 13.
7. **Child Psychology for Professional Workers.** Teagarden, Florence. Prentice-Hall, Inc., New York, 1940. p. 219.

Under the groupings of attitudes, knowledge, and application have been listed the necessary content material for parents in general. Now, what about those who will need special material as well? One thinks first of the parents of exceptional children. Here again, parental attitudes are important. To accept the child as he is, if crippled, or mentally defective, or socially maladjusted, and then to work out a constructive program of physical and mental health, is a problem with which many parents are unable to cope. These parents need guidance, perhaps even to the extent of psychiatric service. The parents of gifted children, as well, face peculiar problems. Foster parents, in search of knowledge and insight, enter the picture. Much of this specialized content can be supplied by experts in the field. Parent education in this case would function in the selecting of the most appropriate person to deal with the particular problem. The pamphlet on exceptional children[8] emphasizes the responsibility of parents in developing the inherent possibilities of physically handicapped children, with the ultimate goal of self-dependence.

Methods.—The methods by which parents are helped to understand and take action about physical development and health education are legion. No one way is adapted to the needs of any parent or of any group of parents. In general, the parent educator works with parents individually and in groups. Probably the entire needs of any given parent will best be met by a combination of individual conference and group work methods.

Individual conferences presuppose a degree of intimacy and a depth of rapport not necessary nor attainable in group work. But for the timid, insecure parent the personal conference may work wonders. He is encouraged to reveal the things about which he is worrying, and feels reassurance in the fact that he is important enough to warrant an interview. Of course, the physician is best qualified to look after the health needs of these individuals, but it is often the worker with parents who senses this need for a physician's care. Especially is this true with pregnancies, where one often finds the grossest ignorance of the necessity of health supervision by a competent person. It is also true of problems that develop later in the child's life—on the surface behavior problems, but frequently having their origin in some ignored or unrecognized health factor.

8. **Parents' Problems with Exceptional Children.** Bulletin 1932, No. 14, by Elise H. Martens. U. S. Government Printing Office, Washington, D. C. 1932. p. 10.

Effective methods with individuals are winning of confidence, encouragement to talk freely, careful consideration of the problem, and suggestion of a course of procedure. The warning that health matters require health experts cannot be too often repeated. The parent educator acts in the capacity of an advisor, not a diagnostician.

Group work with parents in physical growth and development involves the well-known laws of learning—the laws of readiness, exercise, and effect. Parents must be ready to learn. This means that their interest must be aroused. Returning for a moment to the analysis of the different sorts of parents involved in the local program, this matter of arousing interest assumes Herculean proportions. How, for instance, can one present the facts of heredity to a) a group of college-graduate parents; b) a group of non-English speaking parents; c) a composite group of parents with varying degrees of education, experience, and capacity to learn? Most groups are not homogeneous entirely; but the success of group education will depend upon discovering a central interest or a common goal. If the group is composed of college graduates the matter of language will not be difficult. If the parents do not speak English, visual material will have to be devised. In the composite group one is faced with the necessity of keeping the presentation simple, yet making it sufficiently challenging for all to feel the appeal. Thus one sees that the first requirement in creating readiness is an analysis of the group and the discovery of its peculiar needs and capacities. The particular method that best suits the particular group must be sought. The law of exercise is applied in groups by securing participation, usually by informal discussion. The law of effect is the most potent of all—unless the group gets a feeling of satisfaction, all teaching is of little avail.

Various methods of use in group work with parents may now be discussed with an evaluation of their peculiar merits in teaching parents the essentials of physical growth and development.

1. *The Discussion Method.*

   Probably this is used more frequently than any other method. It allows parents the opportunity to ask questions; to relate their own experiences to the findings of experts. In all the topics considered under content in the first part of this paper, parents should be encouraged to express their views. Many erroneous concepts are thus revealed, and may be cleared up.

Kugelmass[9] says that discussion develops openmindedness, relevance, cooperation, and judgment.

2. *The Lecture Method.*

Frequently a talk by an expert gives a touch of authority to the subject under consideration. Such subjects as evolution, heredity, medical facts, and mental hygiene would lend themselves well to the lecture method. Accurate information is the basis for any real discussion.

3. *The Lecture-Question Method.*

This is a combination of the two methods already mentioned. An example of a health education topic which would be well treated by this method is, "Physical Education in the Public Schools." This would afford an excellent opportunity for parents to become informed and then to assist in the program by seeing the importance of home-school cooperation.

4. *Lessons on a Book.*

For some groups of parents, in particular those interested in reading and study, this would be a good method. Many groups who are not at first interested in intensive work for themselves may be stimulated by such a method to exert themselves intellectually. Rand, Sweeny, and Vincent[10] have an excellent book on the very subject of physical growth and development, with a series of questions on the text at the end of each chapter.

5. *Essays.*

Here it is supposed that one member of the group prepares material in the form of a paper to be read before the group. Subjects requiring special research and detailed information, such as the fuction of the endocrine glands, growth changes in adolescents, nutrition, physical exercises adapted to each stage of growth, might be presented in this way.

6. *Courses of Study in Magazines.*

Some magazines such as Child Study Magazine (see footnote 5) and Parents' Magazine[11] have carefully prepared courses and units of study on health matters. These have been prepared by experts with an understanding of parents' needs, and can be highly recommended.

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9. **Growing Superior Children.** Kugelmass, I. Newton. D. Appleton-Century Co. New York, 1935. p. 524.

10. **Growth and Development of the Young Child.** Rand, Sweeny & Vincent. W. B. Saunders Co., Philadelphia, 1935.

11. **Study Course on the School-age Child.** Parents' Magazine, 1941. "Sex Facts Boys and Girls Need to Know." p. 123.

7. *Panel Discussions.*

For variety, on such a topic as, "A Community Health Program", various community experts, such as a doctor, a teacher, a social worker, a parent, a public health official, and a physical education teacher, might present different points of view. This is stimulating to parent groups, and helps them to develop community-consciousness.

It is assumed that these methods may be tried out in various combinations. The important thing is to keep group interest at a high pitch by variety.

Various materials can be used to good advantage in all these types of methods. A brief consideration of these may be helpful.

1. *Illustrative and Visual Materials.*

Visual material is the one best way to fix facts in mind. Facts in evolution, cell development, the Mendelian Law, inheritance of sex-linked characteristics, proportions in growth, and many others are well presented by pictures, charts, graphs, and tables; health teaching of such subjects as tuberculosis and syphilis are vividly portrayed by moving-pictures. The recording of a discussion on the blackboard serves to point it up and fix it in the memory.

2. *Dramatizations.*

This is almost a sure-fire method of arousing interest in a new group. If a matter of health interest appears in a skit or play, the group's interest is a foregone conclusion. Participation in dramatics gives release to the creative elements in the group, and affords an opportunity of self-expression to some members who cannot vocalize easily.

3. *Field Trips.*

Excursions to the public schools to visit physical education classes would be an interesting variation. A trip to the Buffalo Museum of Science, to visit the Hall of Man, serves to teach the facts of evolution efficiently.

4. *Reading.*

This is the device most frequently used and most easily provided. Often a group can be steered gently into reading by using short magazine articles and gradually reading chapters of a book, until they are ready to read entire volumes. In this particular subject, one feels that eventually the group would

need to read for themselves, to cover the vast amount of material available and pertinent.

In all these various methods and materials one note should be constantly struck—that of helping parents to become inwardly more secure. As Dorothy Baruch puts it[12], when the parent can differentiate growth problems from "real problems," he will not worry about minor things. The nursery school can help the alert, sensitive parent to see the changes that occur during the first six years as normal. The same thing is true for parents at other stages of the child's growth. Parents of adolescents, in particular, need the reassurance of accurate knowledge to cultivate the poised, impersonal attitude that helps children over this tense period of change.

The needs of parents for a program of instruction in the basic principles of physical growth and development are apparent. Some idea of the content of such a program has been outlined. Suggestions as to methods and materials have been made. It now remains to put this program of parental training into effect, to make it the living, vital thing it deserves to be, for health is the very cornerstone of effective family living.

* * * * *

Dr. Stewart Returns as State Health Commissioner, — Dr. James Stewart, formerly State Health Commissioner and for the past eight years in private practice in Jefferson City, has been again appointed to the position for a four year term, succeeding Dr. Harry F. Parker. Dr. Stewart was first named health commissioner in 1925. Prior to that he had been director of the hygiene division of the public school system in St. Louis. When his second term ended, in May, 1933, Dr. Stewart returned to private practice. He was a member of the state legislature from 1905 to 1909 and served as secretary of the state board of health during his term as health commissioner. The Journal of the American Medical Association, July 26, 1941, p. 303.

Because Dr. Stewart was not only formerly Director of School Health Services in St. Louis, but one of the leaders in the field of school health, we are particularly interested in bringing this reappointment to the attention of the members of the Association. Ed.

12. **Parents and Children Go to School.** Baruch, Dorothy W. Scott, Foresman and Co. New York, 1939. pp. 190-191.

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EDITORIAL

The article by Miss Eaton, "How To Teach Parents the Basic Principles of the Physical Growth and Development of Children and Youth," attacks the problem of health education from an angle somewhat different from that ordinarily presented.

Those of us who have struggled in the health service section of the school health program to get improvement of physical conditions through cooperation of the parents realize how extremely difficult it is to get contact with parents so that we may give them needed information. We have the struggle of persuading them to use their information in such a way that the child will be benefited. One of the basic needs, then, is to bring about the establishment of health attitudes on the part of parents that will stimulate them into taking action. Some health educators have set up the program in health education as being made up of four parts: the establishment of good health habits; the giving of information so that the person being instructed will know the reasons that underlie efforts to secure good health habits; the attempt to establish ideals of health and physical welfare; and lastly, to build such attitudes towards health and physical welfare as will make the person keenly aware of his own responsibility toward the health of those about him, as well, of course, as being aware of the responsibility of the community towards him in health matters. It is in this phase of attitudes that rests, it seems to us, the major cause of our failure

to get the desired reaction of parents towards bringing about the correction of deviations from physical normal, if such cases are correctable.

We criticize parents for not having the defects of their children corrected, when oftentimes they do not understand the nature of the defect, nor do they understand the importance of that defect as regards the future health, welfare, and success of the child. Information has not gone far enough then. Parents usually are intensely careful about the health of their babies, but as soon as they reach the runabout age, they feel that the baby and nature will take care of the situation, and they have little further responsibility. The pediatricians have done a splendid job in stimulating parental interest, as well as community interest, in infant welfare. Those of us who assume the responsibility of taking over after the infant stage have not been so successful. Health departments might well intensify their efforts in the field of adult education, particularly that part of it having to do with informing parents as to the dangers of physical defects in the pre-school age, and as to the material and procedures for bringing about physical improvement, so that the child may *safely* attend school. Here is a huge field wherein the health department may well influence the improvement in health of school children.

Only rarely has talk ever cured anybody, and talk alone certainly will not improve the physical defects of a child. Action is essential, and the person responsible for that action is the parent. We should place in the hands of the parent all possible aid in the way of stimulating him to a better attitude, and give him better information, so that he may act sensibly at the behest of his improved attitude.

Health educators are partly, at least, responsible for the lackadaisical attitude of parents towards bringing about correction of remediable physical defects. We have heard a reputed leader in the field of health education in the public schools offer as an excuse for parents not having dental defects corrected, that the parent could not afford to pay the charges that the private dentist makes. Statisical studies indicate that these folks who have repeatedly argued that they cannot afford to have physical defects of their children corrected, are the people in the middle economic group. Since most of them support an automobile, we get back to the first principle,—that they have not yet acquired the proper attitude as to their individual responsibility for the health of their own child.

ABSTRACTS

Legal Liability,—Rosenfield* has reported on some very interesting judicial decisions regarding the liability of teachers and of boards of education for injuries incurred by pupils in, on, and about school buildings and premises.

"Two cases involving suits against the school board rather than the teacher clearly restated the basic test of negligence applicable to teachers as well as to school boards: that the degree to which one should anticipate certain dangers, and act accordingly, constitutes the legal standard for the determination of negligence. Unless one acts with reasonable foresight in view of the circumstances he is negligent."

In a case in the State of Washington a twelve year old girl playing tag during lunch recess stubbed her toe over a projecting step, fell down a flight of stairs along which there was no railing, and thrust her hand through a glass basement door, which was suddenly slammed shut by another pupil. The judgment was for the injured girl, in that the school district knowingly maintained the dangerous condition, and it was reasonable to anticipate that children playing might trip over this step[1].

"Somewhat similar injuries occurred in Tennessee where a child fell into a depressed basement or area next to a playground because no guard rail was provided[2]; in Pennsylvania when a child fell through a floor of a school building which was being demolished[3]; in California where a student leaving the school fell against a century plant situated on the side of the pathway leading from the school to the street[4]; and in New York when a grandparent fell into a hole in the playground of her granddaughter's school[5]."

On the other hand, in New York State a toilet was adjacent to the school lunchroom, accessible through two doors. One door-check was defective, and a plaintiff slipped and caught her hand in the door. The school district was not held negligent, since the court said: "The accident happened in a most unusual way. From the defect in the door-check one could not reasonably foretell an accident of that nature[6]."

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*Rosenfield, Harry N., "Some Recent Court Devisions on Legal Liability of Teachers."

1. Eckerson v. Ford's Prairie School District, 3 Wash. St. (2d) 475, 101 Pac. (2d) 345 (1940).
2. Odil v. Maury County, 175 Tenn. 550, 136 S.W. (2d) 500 (1940).
3. Devlin v. School District of Philadelphia, 337 Pa. 209, 10 Atl. (2d) 408 (1940).
4. Kelso v. Board of Education of City of Glendale, 109 Pac. 2d) 29 (Cal. App., 1941).
5. Farrell v. Board of Education, 20 N. Y. Supp. (2d) 161 (App. Div., 2nd Dept., 1940).
6. Millman v. Board of Education of New York City, 104 New York Law Journal 1331, October 30, 1940.

In Ohio[7] [8] [9] a student sued a teacher because of injuries inflicted by a fellow student in a class for defectives and incorrigibles. The teacher allowed the pupils to purchase milk and to retain the milk bottles. The teacher left the room. A student threw a bottle at the plantiff, blinding him. Similar escapades had happened before. The court absolved the teacher of liability stating that his absence from the room was a "remote cause" of the injury.

In Ottawa[10] a first year high school student broke his elbow in vaulting a horse, in which he had had previous instruction and successful practice. The teacher had assigned two seniors to supervise. The court absolved the school of negligence, since it was not shown that the defendant's negligence was the direct cause of the accident, and moreover, it was shown that the pupil had been guilty of negligence, since he assayed the jump without the assistance of the helpers.

Both in Ohio and in Canada courts have refused to compel the school to segregate pupils of different ages and experience.

In California a girl in a physical education class proceeded from the gymnasium to the playground across a private school road used for school deliveries. The sixteen year old girl ran into the middle of a delivery truck, and was hurt. Since she knew of the use of the road by trucks, and failed to look for them, the board of education was held not liable, the ruling being that: "A pupil must exercise that degree of care which can be expected under the circumstances of a child of her age[11]."

In California a student plantiff engaged in a scuffle and broke her arm during the luncheon period, when no supervision was provided. The court left it to the jury to decide whether such lack of supervision was a contributing factor, stating that failure to provide supervision "may reasonably be expected to result in rough and dangerous practices of wrestling and scuffling among the students[12]."

In New York State a child playing in the school yard during the luncheon period was hit in the eye by a rubber ball thrown by another student. The court ruled that the board of education's "obligation was fulfilled when it provided for adequate supervision in the person of one or more instructors[13]," the court feeling that

7. Guyten v. Rhodes, 65 Ohio App. 163, 29 N.E. (2d) 444 (1940).
8. Eckerson v. Ford's Prairie School District, Supra n. 1.
9. See (Note) 29 Georgetown Law Journal, 390 (Dec. 1940); 14 Cincinnati Law Review 111 (Jan. 1941).
10. Butterworth v. Collegiate Institute Board of Ottawa, 1940 Ontario Weekly Noted, 332.
11. Taylor v. Oakland Scavenger Co., 103 Pac. (2d) 605 (Cal. App., 1940; rhe. granted Aug. 15, 1940).
12. Forgnone v. Salvadore Union Elementary School District, 106 Pac. (2d) 932 (Cal. App., 1940).
13. Graff v. Board of Education of New York City, 258 App. Div. 813, 15 N. Y. Supp. (2d) 813 (1939), aff'd. 283 N. Y. 574, 27 N. E. (2d) 438 (1940).

the duty of supervision was fulfilled by the provision of general supervision, and that it was not necessary to exercise supervision over each child, or over each piece of equipment.

While distinguished counsel are of the opinion that safety patrols are improper school board activities, the New York Legislature has adopted a statute authorizing and empowering school boards to organize school safety patrols and exempting school boards, school officials, and teachers from any liability for accidents resulting.[14] [15]

In some states the courts have ruled that school bus drivers are liable for neglect in permitting students to alight from the bus in such a way as to be struck by approaching cars. [16] [17] [18] [19]

In a New York City high school, a pupil sustained injury when his loose fitting sweater caught in the lead screw of a lathe. In attempting to extricate himself his finger was cut off. The claim of negligence was based on the fact that the board of education failed to provide tight-fitting overalls, and should have forbidden wearing loose fitting clothes. The lower court found the school guilty of neglect. The court on appeal reversed the judgment. The case has been taken to a higher court. If the judgment is sustained, would it not mean that teachers must see that sneakers are provided for gym classes, or ear plugs for students using the pool? A part of the argument was as to whether there had been adequate safety instruction, the evidence being in sharp conflict. This means that the teacher should keep some sort of check list to show when and how much safety instruction was given. All this gets back to the idea that "the sounder the safety program, the less will be the number of recent court decisions on legal liability[20]." Abstracted by C. H. Keene, M.D., from The Journal of Health and Physical Education, June, 1941, p. 366.

14. Laws of New York, 1941.
15. Rosenfield, Liability for School Accidents (1940), p. 103-4.
16. Casper v. Longview School District No. 122, 105 Pac. (2d) 503 (Wash. 1940).
17. Kline v. San Francisco Unified School District, 104 Pac. (2d) 661 (Cal. App., 1940); Wicklund v. Plymouth Elementary School District ,99 Pac. (2d) 314 (Cal. App., 1940).
18. Gazaway v. Nicolson, 9 S. E. (2d) 154 (Ga., 1940); Greeson v. Davis, 9 S. E. (2d) 690 (Ga. App., 1940).
19. Kramethauer v. McDonald, 44 N. M. 473, 104 Pac. (2d) 900 (1940).
20. Edkins v. Board of Education (Appellate Division, 2nd Dept.) 105 New York Law Journal 1788 (April 22, 1941).

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Health Education in Cincinnati,—The Public Health Federation of Cincinnati has issued a report on its health education program from June 1940 to June 1941.[1] The program outlined is carried out through the Public Health Federation, which is a fed-

1. Health Education Program, June 1940-41, Public Health Federation, Cincinnati, mimeographed. Undated.

erated agency in which are represented many public health groups in the city of Cincinnati. This health education program was carried on by the federation acting as the agency for a cooperative effort by the Cincinnati Academy of Medicine, the board of health, and the other public health agencies. In carrying this health education program to the public, use was made of newspaper articles, radio dramatizations, car cards, factory posters, bulletins to parent-teacher associations, cards to physicians, public health lectures, exhibits, motion picture showings, and printed matter. The newspaper articles are carried daily as educational columns under the title 'Save a Life." Car cards are placed in all the street cars and some busses. Factory posters are posted in all factories, and physicians' cards keep all physicians in close touch with the health education program. Included in the list of subjects were thirty-eight principal topics including anemia, burns, child health, diabetes, eyes, first aid, general health, hearing, influenza, mental hygiene, physical examination, rabies, safety, tuberculosis, and venereal diseases. In addition, a large miscellaneous classification included fifty-four other topics, such as allergy, constipation, deodorants, fainting, glands, headaches, industrial health, marihuana, nerves, overweight, posture, quacks, rats, smoke, tonsils, underweight, women, yellow fever, and roentgen rays. This report exemplifies in simple practical form the principles of health education which can be applied in any community, large or small. The grouping of agencies and their cooperation through a federation is a practical demonstration of the community health council recommendation which has often been made but too seldom put into effect. The fact that Cincinnati has done it so well should suggest to public health leaders in other communities the possibility of doing likewise. The Journal of the American Medical Association, September 6, 1941, p. 865.

* * * * *

Dental Caries,—The connection between dental caries in children and the reduced cutaneous production of vitamin D from solar radiation due to climatic factors has been studied by East and Kaiser.[1] They took into consideration the mean number of hours of sunshine annually, the latitude, and the mean winter temperature. Next they selected the caries rates from white children residing in three hundred and fifty-eight rural or semirural counties of twenty-four states of the United States as determined by data

1. East, Bion R., and Kaiser, Hilda: Relation of Dental Caries in Rural Children to Sex, Age and Environment, Am. J. Dis. Child. 60:1289 (Dec.) 1940.

collected under the direction of the American Dental Association and the United States Public Health Service.[2] The survey comprised 581,708 children about equally divided according to sex and classified in age groups of 6 to 8, 9 to 11, and 12 to 14 years. Rural children were selected because of the greater uniformity in ethnology, food, housing and living conditions, and in the amount of dust and smoke in the air. The study was restricted to white children, to exclude, as far as possible, the variable which skin pigmentation might introduce. Only caries in permanent teeth was considered. The data for the mean number of annual hours of sunshine in the various counties and for the mean winter temperature were taken from records of the United States Weather Bureau. Of the three hundred and fifty-eight counties, one hundred and ninety had more and one hundred and sixty-eight had fewer than two thousand six hundred hours of sunshine annually. Groups living in counties where most sunshine prevailed had in every instance the lowest rate for caries. One hundred and thirty-four counties had a mean winter temperature higher and two hundred and twenty-four a mean temperature lower than 30° F. Groups living in zones in which the mean winter temperature was below 30° F. had higher rates for caries than those who lived where the mean temperature was higher. One hundred and sixty-nine counties were north and one hundred and eighty-nine were south of latitude 40 north. In every instance the children living in the northern zone had a higher mean rate for caries. To determine the degree of relation between the caries rates and the three climatic factors of sunshine, latitude, and winter temperature, the correlation coefficients of all possible combinations were computed by means of the partial regression equation,[3] an intricate statistical formula, and the results are tabulated by the authors. The lowest values in their sunshine series indicated that each additional hundred hours of sunshine was associated with a decrease of 3.92 ± 0.8 and 4.7 ± 1 per cent from the mean rates of caries in the permanent teeth of boys and girls, respectively, in the 9 to 11 year groups. The highest values were in the 6 to 8 year groups, which showed respective decreases of 7.4 ± 1 and 6.3 ± 1.6. The values for the 12 to 14 year groups were intermediate. In their latitude series, each increase of 1 degree of latitude was accompanied with

2. Messner, C. T.; Gafafer, W. M.; Cady, F. C., and Dean, H. T.: Dental Survey of School Children, Ages 6 to 14 Years, Made in 1933-1934 in Twenty-Six States, Pub. Health Bull. 226. U. S. P. H. S., 1936.

3. Fisher, R. A.: Statistical Methods for Research Workers, London, Oliver & Boyd, 1936.

a percentage increase of 2.7 ± 1.3 in the caries rates for boys of 6 to 8 years. In girls of the same age the increase of the mean rate was 1.1 ± 1.2 per cent. The other groups showed important and statistically significant percentage increases. The lowest value for the groups of 9 to 11 and 12 to 14 years was 4.1 ± 1.1 per cent for each degree of latitude. In the evaluation of the relation of winter temperature to caries rates, it was found, after the overlapping influences of sunshine and latitude had been eliminated, that winter temperature exerted little effect on the caries rates where boys were concerned and on those for girls in the age groups from 9 to 11. This study, accordingly, confirms previous evidence that a significant relation seems to exist between the incidence of dental caries and the amount of sunshine and the latitude. Winter temperature was an important climatic factor only for girls in the age groups of 6 to 8 and 12 to 14 years. This difference in incidence, the authors speculate, may be due to the fact that the youngest girls are kept indoors in cold weather while boys of the same age are not. Similarly, rural girls between 12 and 14 years may have indoor duties while boys of the same age find their recreation and tasks outdoors. The results of this study of environmental factors in relation to dental caries, they say, are in accord with those obtained in controlled vitamin D therapy experiments and in artificial ultraviolet irradiation. The Journal of the American Medical Association, August 16, 1941, p. 536.

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School Dispensaries,—The national health department in Buenos Aires has organized a dispensary service in schools situated within the sparsely settled regions of the interior of the country. This service is intended not only for emergency cases, but for the treatment of the most common diseases occurring in school children, such as trachoma, malaria, ankylostomiasis, and endemic goiter. While the measures enabling this service do not solve the problem of medical aid, they make possible treatment which otherwise would not be available to those who need it. The medicine chests are not uniform but are adapted to the needs of the community. Four different units have been instituted, a standard unit and three units intended for endemic regions. All of them contain the same surgical material for emergency cases and medicaments required for internal medication, for skin diseases, for convalescent persons and for endemic fever. Every unit contains a list of the medicines and directions for their use. The Journal of the American Medical Association, July 19, 1941, p. 212.

Dr. Neilson,—Word has just come to this office of the great bereavement of Dr. N. P. Neilson, Executive Secretary-Treasurer of the American Association for Health, Physical Education, and Recreation, who is also a member of the Governing Council of the American School Health Association, in the loss of his wife, and the severe injury of his son in an automobile accident last August. We are sure that the officers of the American School Health Association, its Governing Council, and members join us in extending to Dr. Neilson our sincere sympathy.

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Thiamine Overdosage and Toxicity,—In view of the various advertising campaigns, and because of the somewhat common self-medication of many people by use of thiamine hydrochloride (Vitamin B_1), attention is called to a report in **The Journal of the American Medical Association,** May 3, 1941, which indicates that the needed, or even safe dosage of this drug is considerably smaller than often is taken, and that with continued overdosage toxic symptoms such as "headaches, increased irritability, insomnia, rapid pulse, weakness, and trembling" appear. In his report Mills concludes as follows:

"Recognition of symptoms of overdosage at once necessitates more adequate information as to actual thiamine needs under various conditions. Such information can be obtained only by blood level and excretion rate studies. Addition of thiamine hydrochloride to bread and other commonly used foods, without control over the intake level, also carries a potentiality of harm. This is particularly true in those stimulating middle temperate regions where hyperthyroidism and other forms of metabolic disturbance are already prone to occur. The medical profession should recognize the need for greater conservatism in the use of this important vitamin, and its distribution through both nonmedical and medical channels should be placed on a more scientific and controlled basis."
Clarence A. Mills, M.D., Professor of Experimental Medicine, University of Cincinnati College of Medicine. The Journal of the American Medical Association, May 3, 1941, p. 2101.

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Convention Program,—The program for the annual meeting at Atlantic City was printed in full in the September issue of The Journal of School Health. Therefore, it does not appear in this issue. At the convention itself, the program will be printed with the program of the various meetings of the American Public Health Association. This may be secured at the time of registration at the registration desk.

Information,—At the annual convention meeting at Atlantic City tickets to the Monday evening dinner, to the breakfasts on Wednesday and Thursday, and to the luncheon on Wednesday will be on sale at the registration desk of the American Public Health Association. You are urged to purchase your tickets for these meetings at the time of registration.

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Vitamin B. Again,—There is a very interesting letter in *The Journal of the American Medical Association* for September 6, 1941, page 881, headed "Comparative Food Sources of Thiamine." As a matter of fact, it also reports on riboflavin. The letter discussed the comparative amounts of thiamine and riboflavin per thousand calories of various vegetables. As evidence that "Things are not what they seem" immediately following the letter is a note by the Editor of *The Journal of the American Medical Association* bringing to mind the practical difficulties of increasing much the thiamine content by use of certain vegetables seemingly high in such content. For instance, there are about two hundred stalks of asparagus or twelve pounds of lettuce needed to produce one thousand calories. Ed.

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REVIEWS

Effective Living. *By C. E. Turner, A.M., Sc.D., Dr. P. H. and Elizabeth McHose, B.S., M.A.* The C. V. Mosby Company, St. Louis, 1941. Pp. 432. Price, $1.90.

This text has included in one volume three phases of healthful living: the health activities of the individual for his own personal benefit, the health ideals and efforts of the individual as related to his ancestry and family health, and his health activities and attitudes as they effect the community, and the health procedures of the community as they effect the individual.

Part I, "Effective Living for the Individual," contains the material which often is spoken of as personal hygiene or personal health. Enough information is given, simply stated, concerning the construction and function of the various parts and "systems" of the body, so that the student may well understand the discussions and procedures regarding the effective care of these parts and "systems."

Part II, "Effective Living in the Family," discusses the hereditary factors concerned in health and healthful living, and health of the family as a group, and the environment in the home as it effects the health of the members of the home unit.

Part III, "Effective Living in the Community," deals with such factors as planning for community health, lowering the death rate, sanitation, health agencies, and health programs.

There is an excellent appendix on the control of communicable diseases showing in skeletonized form the type of the disease, its cause, the way in which it is transmitted, the incubation period, and the measures for control; and another appendix on plans for effective coordination.

The value of the material is greatly enhanced by sections at the end of each chapter on self-checking, on problems and activities, and on references.

The background of the authors as investigators, and instructors in the field of personal health, and of community health, and their experience in teaching situations has produced a text of outstanding value. C. H. Keene, M.D.

Play for Convalescent Children in Hospitals and At Home. *By Anne Marie Smith.* A. S. Barnes and Company, New York, 1941. Pp. 133. Price, $1.60.

Because one is a patient in a hospital does not necessarily mean that one cannot or should not play. We are just beginning to realize the value of recreation and of a recreational attitude as a weapon in therapy. The rapid strides that have been made in the last decade in the treatment used in hospitals for the insane has been a landmark in our forward progress in the handling of these unfortunates. Neither is the use of play for convalescent children a wholly new idea. As far back as the beginning of this century our most progressive children's hospitals were trying — largely through the use of volunteers—to make the lot of the convalescent more happy. That such an effort would expedite recovery was not then fully realized by the staff. The effort came largely from the outside.

Here, however, is the recognition of a supervising official on a hospital staff that play has a definite place in the hospital program of therapy. More than that, this text expounds a philosophy, and sets up an administrative procedure. It discusses play as a factor in the education of parents as regards the sort of material they might and should supply their children for amusement and happiness, and the play equipment needed by the hospital itself.

Lastly, it classifies the forms and types of play, and gives definite information as to the sort of play material advisable, usable, and safe, and lists the more attractive and desirable children's books for the convalescent. Here is not mere tolerance, but a plan and encouragement. C. H. Keene, M.D.

School Health Service, A Study of the Programs Developed By The Health Department In Six Tennessee Counties. *By W. Frank Walker, Dr. P. H., and Carolina R. Randolph.* The Commonwealth Fund, New York, 1941, pp. 172. Price, $1.50.

This interesting and profitable text is a description of what is going on in certain counties in Tennessee along the following lines. First, it sketches the plan, the staff used, and the characteristics of the group upon whom the program is being carried out, and sketches previous health department supervision in that region.

A chapter is devoted to each of the types of defects ordinarily found in school children, such as, dental defects, visual defects, tonsil defects, and one on the group of defects less often found, such as those of the heart, lungs, of nutrition, and the like. Then there is a chapter on the association of defects one with the others. There is, too, a discussion of the immunization status of the children in the region studied. There is an exposition of the efforts used to enlist children and parental groups, and the results secured.

The concluding chapters take up the program itself: the presence of parents at examinations, pre-school health supervision, the communicable disease control, the physical conditions found by means of the operation of the program, and the like, and what an ideal program should provide.

An appendix shows the development of school health services in Tennessee, and another sets up the method of procedure recommended to bring about results.

This text is peculiarly profitable, because, while it presents a program and an ideal, it also shows methods of procedure that are being actually used, and discusses the results from these procedures. In other words, it is more than a theory. It is a report of progress. C. H. Keene, M.D.

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MEETING

The American School Health Association annual meeting will be held in Atlantic City, N. J., October 13 to 17, in conjunction with the meeting of the American Public Health Association. The headquarters of the School Health Association will be at the Hotel Chelsea, where many of our meetings will be held.

The program for the meeting appears in the September Journal.

Hotel reservations should be made immediately. Rates next page.

Hotel Chelsea Daily Rates,—European Plan:

Single room with private bath, one person, $3.00, $3.50, $4.00, $5.00, $6.00.

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Single room without bath, one person, $2.50.

Double room without bath, two persons, $4.00.

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